Amendments to the Drawings.

None.

REMARKS/ARGUMENTS

Information Disclosure Statement.

Applicant has not received an initialed copy of the information disclosure statements dated September 28, 2008. Applicant respectfully requests that the Examiner consider the art in that statement and issued an initialed copy of Form 1449. If the Examiner has already sent an initialed copy of Form 1449, Applicant respectfully requests another copy because the first was not received.

Examiner Interview.

Applicant thanks the Examiner for his time on April 10, 2008. The Examiner and the undersigned discussed the prior art, claim 1, and possibility of amending claim 1 to include the subject matter of claims 3 and 8. No agreement was reached on allowable subject matter if these amendments were made.

The Claims.

Claims 1-11, and 14-22 are pending. Claims 1, 10, and 11 are independent claims. The remaining claims depend, directly or indirectly, from the independent claims.

Independent claim 1 has been amended to state that each of the band filters has a bandwidth at least twice as large as a periodic bandwidth of each of the periodic filters. Support can be found, for example, in paragraphs [0083] and [0084] and in Fig. 26. Claim 1 has also been amended to include the subject matter of claim 8. Claim 1 has also been amended to include the subject matter of claim 3 re-written as a Markush group. Support may be found, for example, in paragraph [0087] of the present invention. Claim 1 has also been amended to recite that the periodic filter includes at least one Mach-Zehnder filter, Michelson interferometer, and an arrayed waveguide. Support for this amendment can be found, for example, in paragraph [0088] of the present application and in original claims 4 and 5.

Claims 3 and 8 have been cancelled.

Claims 10 and 11 have been amended in a manner similar to the amendments to claim 1.

Claim Rejections.

All of the claims are rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent Application Publication Number 2002/0181832, in the name of Feng et al. (hereinafter "Feng"). Applicant disagrees with the rejections for the reasons set forth below.

Claim 1.

Claim 1 recites an optical system, comprising:

> *an optical transmitter configured to transmit information over two channels, each channel being at a different wavelength;*
>
> *two optical filters, each of the optical filters including a band filter configured to filter at least one optical channel and a periodic filter configured to receive the at least one optical channel from said band filter and provide a single filtered optical channel and shape the bandwidth of the single filtered, shaped optical channel, wherein each of the band filters has a bandwidth at least twice as large as a periodic bandwidth of each of the periodic filters, wherein each of said band filters includes a filter selected from a group consisting of a fiber Bragg grating, a Fabry-Perot filter and a thin film filter, wherein each of said periodic filters includes a filter selected from a group consisting of a Mach-Zehnder filter, a Michelson interferometer, and an arrayed waveguide; and*
>
> *an optical receiver positioned proximate the optical filter in the network and configured to receive at least two filtered shaped optical channels, wherein said optical receiver is configured to receive and convert the two filtered, shaped optical channels into two electrical signals and combine the two electrical signals into one electrical signal.*

Applicant submits that Feng fails to teach the combination of elements recited in claim 1. For example, Applicant submits that Feng fails to teach the combination of band and periodic filters, wherein each of the band filters has a bandwidth at least twice as large as the periodic bandwidth of the periodic filters. In particular, the cited portions of Feng teach the combination of periodic filters

each having approximately the same periodic bandwidth. See, for example, Feng at Figs. 2A, 3A, 3B, 4A, 5A, and 5B, which illustrate the output profiles of filter components according to Feng.

Furthermore, Applicant submits that Feng fails to teach the combination of band and period filters as recited in claim 1. In particular, Feng at paragraph [0008] states (emphasis added):

> *The optical filter system includes a first filter configured to output light signals having wavelengths falling within a plurality of periodically spaced wavelength bands. A second filter is in optical communication with the first filter and is configured to output light signal having wavelengths falling within a plurality of periodically spaced bands.* (emphasis added).

In addition, Feng at paragraph [0050], the first paragraph of the detailed description, states (emphasis added):

> *The invention relates to an optical filter system. The optical filter system includes a first periodic filter and a second periodic filter.*

Furthermore, Figs. 2A, 3A, 3B, 4A, 5A, and 5B illustrate the output profiles of filter components according to Feng. In all cases, a periodic filter profile is illustrated.

The Action cites paragraph [0010] of Feng as teaching that the first filter of Feng is the band filter element recited in claim 1 of the present invention. However, paragraph [0010] of Feng never states that the first filter is a band filter. Instead, paragraph [0010] of Feng states in part:

> *the first filter is configured to output light signals having wavelengths falling within one or more wavelength bands.*

Claim 18 is also cited in the Action and that claim uses language similar to that from paragraph [0010]. This language in paragraph [0010] (and in claim 18) of Feng is discussing the way in which the filter works. In paragraph [0008], Feng is describing the periodically spaced bands of the filters. In paragraph [0010], however, Feng is describing which light signals are output from the filter. In particular, the light signals are only output from the filter when the wavelengths of the light signals fall within one or more wavelength bands of the filter. The light signals input to the first periodic filter may fall within several of the wavelength bands of the periodic filter, or those light signals may fall within only one wavelength band of the periodic filter. However, regardless of how many wavebands the light signals fall into, it does not change the periodic filter referenced in paragraph [0008] into a band filter.

As an example, Figs. 3A, 3B, and 3C of Feng illustrate a situation in which light signal wavelengths fall within only one wavelength band of a periodic filter. In particular, as stated in Feng at paragraphs [0062] and [0063], Fig. 3A illustrates the output profile for a first filter component. The first filter component is periodic. Fig. 3B illustrates the output profile for a second filter component. The second filter component is also periodic. Fig. 3C illustrates the output profile for an optical filter system including the components represented by Figs. 3A and 3B. As stated at the end of paragraph [0063], only bands A (in Fig. 3A) and E (in Fig. 3B) overlap, resulting in only band H in Fig. 3C passing out of the filter. As a result, the second filter component is periodic, but as stated in paragraph [0010], it only has "wavelengths falling within one ... wavelength [band]", which is wavelength band E. That situation, however, does not change the fact that the second filter component is a periodic filter.

Applicant notes that paragraph [0010] discusses the first filter as having light signals falling within one (or more) of the wavelength bands, while in the example just given it is the second filter component for which light signals fall within only one of the wavelength bands. However, Applicant submits that the first and second filters are interchangeable in this example because Feng states at paragraph [0011]:

> *The system can be configured such that the first filter receives the light signals output by the second filter or such that the second filter receives the light signals output by the first filter.*

As a result, Feng contemplates that the first and second filters may change their relative orientation so that, for example, the first filter component can be configured to output light signals having wavelengths falling within only one wavelength band.

Therefore, Applicant submits that paragraph [0010] and claim 18 do not teach that the first filter in Feng is a band filter. Furthermore, Feng teaches away from the present invention by teaching a system having two periodic filters, as opposed to the combination of band filter and periodic filter recited in claim 1 of the present invention. This difference is important because, as stated in the present application near the end of paragraph [0083],

> *The use of the periodic filter 83 following the band filter eliminates the need for a band filter that is precisely controlled to align with the signal channel spectrum, and the periodic filter 83 can be used anywhere in the spectral range of the periodic filter 83.*

As a result, the cited portions of Feng fail to teach at least "a band filter configured to filter at least one optical channel and a periodic filter configured to receive, filter, and shape the at least one optical channel from said band filter and provide a single filtered, shaped optical channel" as recited in claim 1 of the present invention and, therefore, fails to teach at least one element recited in independent claim 1. Accordingly, Applicant submits that claim 1 is in condition for allowance.

Independent Claims 10 and 11.

Independent claims 10 and 11 each recite limitations analogous to one or more of the limitations discussed above with regard to claim 1. Therefore, for at least the reasons set forth hereinabove, Applicant submits that independent claims 10 and 11 are also patentable over Feng.

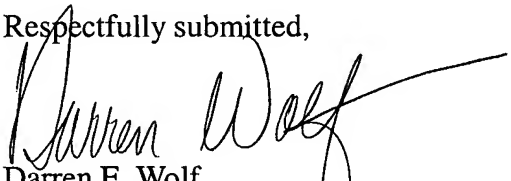
Claims 2-9 and 14-22.

Claims 2-9 and 14-22 depend, directly or indirectly, from independent claims 1, 10 and 11. Therefore, for at least the reasons set forth hereinabove with regard to independent claims 1, 10, and 11, Applicant submits that dependent claims 2-9 and 14-22 are patentable over Feng.

Conclusion.

For the reasons set forth herein, Applicant submits that all claims are in condition for allowance and Applicant respectfully requests that the rejections in the Action be withdrawn and that the application be passed to allowance. If the Examiner has any questions pertaining to this Response or to the subject matter of the present application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,



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